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All: 1 Review: 0 ☐ 1: AIDS. 1997 Dec;11(15):1799-806. [Library Connect](#) [Upstream](#) [Williams & Wilkins](#) [Links](#)**AIDS prognosis based on HIV-1 RNA, CD4+ T-cell count and function: markers with reciprocal predictive value over time after seroconversion.**

de Wolf F, Spijkerman J, Schellekens PT, Langendam M, Kuiken C, Bakker M, Rees M, Coutinho R, Miedema F, Goudsmit J.

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OBJECTIVE: HIV-1 RNA levels in peripheral blood are strongly associated with progression to AIDS, CD4+ T-cell decline, or death. Their predictive value is reportedly independent of the predictive value of CD4+ T-cell counts. Because the interrelations between these parameters of HIV-1 infection are poorly understood, we studied the kinetics and predictive value of serum HIV-1 RNA levels, CD4+ T-cell counts, and T-cell function. **DESIGN AND METHODS:** HIV RNA levels, CD4+ T-cell counts, and T-cell function were measured from seroconversion to AIDS in 123 homosexual men who seroconverted during a prospective study and were followed over 10 years. **RESULTS:** Two patterns of median HIV-1 RNA levels were found during infection: a steady-state and a 'U-shaped' curve. Steady-state high RNA levels were related to rapid disease progression. For the U-shaped curve, there were groups with high and low RNA levels related to disease progression. At 1 year after seroconversion, RNA level was the only marker that was strongly predictive. Furthermore, decreasing RNA levels in the first year following seroconversion were related to better prognosis than stable low levels. Low CD4+ T-cell count and T-cell function became predictive of progression to AIDS at 2 and 5 years after seroconversion, respectively. **CONCLUSIONS:** With ongoing infection, the predictive value of low CD4+ T-cell count and T-cell function increases, whereas the predictive value of high HIV-1 RNA level decreases. These findings reflect the observation that infection with HIV progressively leads towards immune deficiency, which in later stages is most predictive of disease progression.

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